

### **What Is Claimed Is:**

1. A door adapted to at least partially cover a doorway in a wall, the door having an opened position and a closed position, comprising:

a first door panel adapted to be mounted for translation in front of the doorway;

a second door panel adapted to be mounted for translation in front of the doorway, wherein the first door panel has a first open position in front of the second door panel, the second door panel has a second open position adjacent the doorway between the first panel and the wall, and the door is in the opened position when the first door panel and the second door panel are in the first open position and the second open position respectively, the first and second door panels respectively having a first closed position and a second closed position relative to the doorway and being arranged to telescope to position the door in the opened or closed position;

a main drive mechanism providing power for driving the first panel between the first open position and the first closed position; and

an auxiliary drive mechanism coupling the first door panel and the second door panel, the auxiliary drive mechanism using the power provided by the main drive mechanism to drive the second door panel such that the first and second door panels have a first state of movement wherein movement of the first door panel is independent of movement of the second door panel, and the first and second door panels have a second state of movement wherein movement of the second door panel is dependent upon movement of the first

door panel, wherein upon movement of the first door panel away from its closed position, the auxiliary drive mechanism urges the second door panel to move toward the second open position before the first door panel reaches the first open position.

2. The door of claim 1, wherein the auxiliary drive mechanism includes a flexible ring encircling two rotatable members coupled to the second door panel.

3. The door of claim 2, further comprising a link that couples the flexible ring to the first door panel.

4. The door of claim 3, wherein the link is pliable.

5. The door of claim 2, further comprising a stop adapted to be coupled at a fixed position relative to the wall to limit an extent to which the flexible ring may move relative to the wall.

6. The door of claim 5, further comprising a bumper attached to the flexible ring and positioned to alternately engage and disengage the stop.

7. The door of claim 2, wherein the flexible ring is a cogged belt and at least one of the two rotatable members is a cogged sheave.

8. The door of claim 2, wherein the flexible ring is a chain and at least one of the two rotatable members is a sprocket.

9. The door of claim 1, further comprising an opposite door panel substantially coplanar with the first door panel such that the first door panel and the opposite door panel move apart to open the door and move towards each other to close the door, wherein the first door panel abuts the opposite door panel upon closing the door.

10. The door of claim 1, wherein the first state of movement occurs when the first door panel begins to move away from the first closed position, wherein the second state of movement occurs when the second door panel begins to move away from the second closed position, wherein the first and second door panels have a third state of movement as the first door panel begins to move away from the first opened position wherein movement of the first door panel is independent of movement of the second door panel, and the first and second door panels have a fourth state of movement when the second door panel begins to move away from the second opened position wherein movement of the second door panel is dependent upon movement of the first door panel.

11. A door adapted to at least partially cover a doorway in a wall, the door having an opened position and a closed position, comprising:

a first door panel adapted to be mounted for translation in front of the doorway;

a second door panel adapted to be mounted for translation in front of the doorway, wherein the first door panel has a first open position in front of the second door panel, the second door panel has a second open position adjacent the doorway between the first panel and the wall, and the door is in the opened position when the first door panel and the second door panel are in the first open position and the second open position respectively, the first and second door panels respectively having a first closed position and a second closed position relative to the doorway and being arranged to telescope to position the door in the opened or closed position;

a main drive mechanism providing power for driving the first panel from the first open position to the first closed position; and

an auxiliary drive mechanism coupling the first door panel and the second door panel, the auxiliary drive mechanism using the power provided by the main drive mechanism to drive the second door panel such that, when closing the door, the first and second door panels have a first state of movement wherein movement of the first door panel is independent of movement of the second door panel, and the first and second door panels have a second state of movement wherein movement of the second door panel is dependent upon movement of the first door panel, wherein upon movement of the first door panel away from the first open position, the auxiliary drive mechanism urges the second door panel to move toward the second closed position before the first door panel reaches the first closed position.

12. The door of claim 11, wherein the auxiliary drive mechanism includes a flexible ring encircling two rotatable members coupled to the second door panel.

13. The door of claim 11, wherein the first state of movement occurs when the first door panel begins to move away from the first opened position, wherein the second state of movement occurs when the second door panel begins to move away from the second opened position, wherein the first and second door panels have a third state of movement as the first door panel begins to move away from the first closed position wherein movement of the first door panel is dependent on movement of the second door panel, and the first and second door panels have a fourth state of movement after the second door panel reaches the second opened position wherein movement of the first door panel is independent of movement of the second door panel.

14. A method of operating a door adapted to at least partially cover a doorway in a wall, the door having an opened position and a closed position, comprising:

- (1) opening the door by:
  - (a) actuating a main drive mechanism to initially translate a first door panel toward a first open position in front of a second door panel while inhibiting the first door panel from rotating about a vertical axis and without moving the second door panel; and

- (b) using power from the main drive mechanism to actuate an auxiliary drive mechanism to thereby translate the second door panel toward a second open position in front of the wall; and,
- (2) closing the door by:
  - (a) actuating the main drive mechanism to initially translate the first door panel toward a first closed position without moving the second door panel; and
  - (b) using power of the main drive mechanism to actuate the auxiliary drive mechanism to thereby translate the second door panel toward a second closed position.

15. The method of claim 14, wherein the auxiliary drive comprises a flexible ring disposed about two rotatable members that are coupled to the second door panel, and wherein the steps of using power of the main drive mechanism to actuate the auxiliary drive mechanism include moving the flexible ring about the rotatable member.

16. The method of claim 15, wherein the auxiliary drive further comprises a bumper attached to the flexible ring, and wherein the steps of using power of the main drive mechanism to actuate the auxiliary drive mechanism include moving the bumper at least one of into and out of engagement with a stop coupled to the wall.

17. A door adapted to at least partially cover a doorway in a wall, comprising:

a first door panel adapted to be mounted for translation in front of the doorway;

a second door panel adapted to be mounted for translation in front of the doorway, wherein the first door panel has a first open position in front of the second door panel, the second door panel has a second open position adjacent the doorway between the first panel and the wall, and the door is open when the first door panel and the second door panel are in the first open position and the second open position respectively, the panels respectively having a first closed position and a second closed position relative to the doorway;

a main drive mechanism providing power for driving the first door panel from the first opened position to the first closed position; and

an auxiliary drive mechanism powered by the power provided by the main drive mechanism to provide coupled movement of the first and second panels during a first portion of the movement of the second door panel from the second opened position to the second closed position, wherein the movement of the second door panel is uncoupled from the movement of the first door panel during a second portion of the movement of the second door panel from the second opened position to the second closed position.

18. The door of claim 1, wherein the door has a first opening phase, a second opening phase occurring after the first opening phase when moving

the door from the closed to the opened position, a first closing phase and a second closing phase occurring after the first closing phase when moving the door from the opened to the closed position, wherein the first door panel moves independent of the second door panel during both the first opening phase and the first closing phase, and the second door panel is moved by movement of the first door panel during both the second opening phase and the second closing phase.

19. A door adapted to at least partially cover a doorway in a wall, comprising:

a first door panel adapted to be mounted for translation in front of the doorway;

a second door panel adapted to be mounted for translation in front of the doorway, wherein the first door panel has a first open position in front of the second door panel, the second door panel has a second open position adjacent the doorway between the first panel and the wall, and the door is open when the first door panel and the second door panel are in the first open position and the second open position respectively, the first and second panels respectively having a first closed position and a second closed position relative to the doorway;

a main drive mechanism to drive the first door panel from the first open position to the first closed position;

a hanging weight coupled to urge the second door panel to the second open position; and



interfering protrusions provided on the first and second door panel arranged to move the second door panel toward the closed position as the first door panel moves to the first closed position under the influence of the main drive mechanism.

20. A door adapted to at least partially cover a doorway in a wall, the door having an opened position and a closed position, comprising:

a first door panel adapted to be mounted for translation in front of the doorway;

a second door panel adapted to be mounted for translation in front of the doorway, wherein the first door panel has a first open position in front of the second door panel, the second door panel has a second open position adjacent the doorway between the first panel and the wall, and the door is in the open position when the first door panel and the second door panel are in the first open position and the second open position respectively, the first and second door panels respectively having a first closed position and a second closed position relative to the doorway;

a main drive mechanism to provide power to drive the first door panel from the first open position to the first closed position; and

an auxiliary drive mechanism coupling power from the main drive mechanism to the second door panel, wherein the door has a first opening phase, a second opening phase occurring after the first opening phase when moving the door from the closed to the opened position, a first closing phase and a second closing phase occurring after the first closing phase when

moving the door from the opened to the closed position, wherein the first door panel moves independent of the second door panel during both the first opening phase and the first closing phase, and the second door panel is moved by the auxiliary drive mechanism during both the second opening phase and the second closing phase.

21. A door adapted to at least partially cover a doorway in a wall, the door having an opened position and a closed position, comprising:

a first door panel adapted to be mounted for translation in front of the doorway;

a second door panel adapted to be mounted for translation in front of the doorway, wherein the first door panel has a first open position in front of the second door panel, the second door panel has a second open position adjacent the doorway between the first panel and the wall, and the door is in the opened position when the first door panel and the second door panel are in the first open position and the second open position respectively, the first and second door panels respectively having a first closed position and a second closed position relative to the doorway; a main drive mechanism to provide power to move the first door panel from the first open position to the first closed position; and

an auxiliary drive mechanism coupling power from the main drive mechanism to the second door panel, wherein the door has a first opening phase, a second opening phase occurring after the first opening phase when moving the door from the closed to the opened position, a first closing phase

and a second closing phase occurring after the first closing phase when moving the door from the opened to the closed position, wherein the first door panel moves independent of the second door panel during both the second opening phase and the first closing phase, and the second door panel is moved by the auxiliary drive mechanism during the second closing phase.